

**med 5-4-99**FORM PTO-1595 (modified)  
(Rev. 6-83)

RECORD/

05-07-1999

U.S. DEPARTMENT OF COMMERCE  
Patent and Trademark Office

OMB No. 0651-0011 (exp. 4/94)

**PA**

101031697

To the Honorable Commissioner of Patents  
thereof.

... ..hed original documents or copy

## 1. Name of conveying party(ies);

**ASTRA AKTIEBOLAG**

Additional name(s) of conveying party(ies) attached?

## 2. Name and address of receiving party(ies):

Name: **ALLELIX  
BIOPHARMACEUTICALS, INC.**

Internal Address:

Street Address: **6850 Goreway Drive**City: **Mississauga, State: Ontario, Canada**  
ZIP: **L4V 1V7**

Additional name(s) &amp; address(es) attached?

## 3. Nature of conveyance:

<input checked="" type="checkbox"/> Assignment	<input type="checkbox"/> Merger
<input type="checkbox"/> Security Agreement	<input type="checkbox"/> Change of Name
<input type="checkbox"/> Other	

Execution Date: **December 22, 1998**4. Application number(s) or patent number(s): **US 5,420,242 and US 5,010,010**

If this document is being filed together with a new application, the execution date of the application is:

A. Patent Application No.(s)

B. Patent No.(s)

05/06/1999 JSHABAZZ 00000103 5420242

01 FC:581

40.00 OP

Additional numbers attached?

## 5. Name and address of party to whom correspondence concerning document should be mailed:

Name: **Michele M. Schafer**Internal Address: **FOLEY & LARDNER**Street Address: **3000 K Street, N.W.**City: , State: ZIP: **Washington, D.C. 20007**6. Total number of applications and patents involved: **2**


05/06/1999 JSHABAZZ 00000104 5010010

01 FC:581

40.00 OP

**PATENT**  
**REEL: 9935 FRAME: 0404**

ATT RNEY DOCKET NO.: 016777/030

7. Total fee (37 C.F.R. § 3.41). . . . . \$80.00	
<input checked="" type="checkbox"/> Enclosed	
Authorized to be charged to deposit account	
	8. Deposit account number:
	(Attach duplicate copy of this page if paying by deposit account)
DO NOT USE THIS SPACE	
9. Statement and signature. <i>To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.</i>	
Michele M. Schafer Name of Person Signing	 Signature
	May 4, 1999 Date
Total number of pages including cover sheet, attachments, and document: 4	

Mail documents to be recorded with required cover sheet information to:  
Commissioner of Patents & Trademarks, Box Assignments  
Washington, D.C. 20231

PATENT  
REEL: 9935 FRAME: 0405

**ASSIGNMENT**

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, **ASTRA AKTIEBOLAG**, having a place of business at **S-151 85 Soderalle, SWEDEN**, hereby sells, assigns, and transfers, unto

**Allelix Biopharmaceuticals, Inc.**  
**6850 Goreway Drive**  
**Mississauga, Ontario, Canada L4V 1V7**

its successors, legal representatives, and assigns, all right, title and interest in and to the invention(s) and patent(s) therefor, identified as follows:

<b>PATENT NUMBER</b>	<b>ISSUE DATE</b>	<b>TITLE</b>
<b>US 5,420,242</b>	<b>May 30, 1995</b>	<b>PRODUCTION OF HUMAN PARATHYROID HORMONE FROM MICROORGANISMS</b>
<b>US 5,010,010</b>	<b>April 23, 1991</b>	<b>PRODUCTION OF HUMAN PARATHYROID HORMONE FROM MICROORGANISMS</b>

including any reissue and extensions of said Letters Patents, and all divisions and continuations granted thereof, and all foreign rights to the invention(s); this assignment being under covenant, not only that full power to make the same is had by the undersigned, but also that such assigned right is not encumbered by any grant, license, or other right heretofore given, such that the Letters Patents shall be held and enjoyed by said Assignee as fully and entirely as the same could have been held and enjoyed by the undersigned if this assignment had not been made.

The undersigned hereby authorizes and requests the Commissioner of Patents and Trademarks to assign such Letters Patents to said ASSIGNEE, its successors, or assigns in accordance herewith;

The undersigned warrants and covenants that they have the full and unencumbered right to sell and assign the interests herein sold and assigned and that they have not executed and will not execute any document or instrument in conflict herewith;

The undersigned further covenants and agrees they will communicate to said ASSIGNEE, its successors, legal representatives, or assigns all information known to them relating to said inventions and that they will execute and deliver any papers, make all rightful oaths, testify in any legal proceedings and perform all other lawful acts deemed necessary or desirable by said ASSIGNEE, its successors, legal representatives, or assigns to perfect title to said Letters Patents, including reissues or extensions, in said ASSIGNEE, its successors, or

assigns, or to assist said ASSIGNEE, its successors, legal representatives, or assigns in obtaining, reissuing, or enforcing Letters Patents of the United States for said inventions;

The undersigned hereby grants the firm of FOLEY & LARDNER the power to insert in this Assignment any further identification which may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation of this Assignment.

Company: Astra Aktiebolag  
(publ)

Date: 22 December 1998

By: [Signature]

Name: p.p. Claes Wilhelmsson

Title: Executive Vice President  
Research & Development

Date: 22 December 1998

WITNESS: [Signature]  
Asa Wallin Idstam

Date: 22 December 1998

WITNESS: [Signature]  
Bengt Welander

Note: *Prima facie* evidence of execution may optionally be obtained by execution of this document before a U.S. Consul or before a local officer authorized to administer oaths whose authority is proved by a certificate from a U.S. Consul.

03-24-1999

FORM PTO-1995 (modified)  
(Rev. 6-93)

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U.S. DEPARTMENT OF COMMERCE

OMB No. 0651-0011 (exp. 4/94)

100990601

Patent and Trademark Office

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party:

ASTRA AKTIEBOLAG

Additional name(s) of conveying party(ies) attached? No

2. Name and address of receiving party:

Name: ALLELIX BIOPHARMACEUTICALS INC.

Internal Address:

Street Address: 6850 Goreway DriveCity: Mississauga, Ontario, State: Canada ZIP: L4V 1V7

3. Nature of conveyance:

☒ Assignment☐ Merger☐ Security Agreement☐ Change of Name☐ OtherExecution Date: February 18, 1999

Additional name(s) &amp; address(es) attached? No

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is:

A. Patent Application No.(s)

08/463,222, 07/806,271, 08/329,856, 07/239,145,  
08/340,664, 08/461,436, 07/630,969

B. Patent No.(s)

5,646,015, 5,382,658, 5,208,041, 5,496,801,  
5,223,407, 5,599,792

Additional numbers attached? No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Stephen A. BentInternal Address: Suite 500Street Address: 3000 K Street, N.W.City: Washington, State: DC ZIP: 20007-51096. Total number of applications and patents involved: 137. Total fee (37 C.F.R. §3.41). . . . . \$520.00☒ Enclosed☐ Authorized to be charged to deposit account8. Deposit account number: 19-0741

(Attach duplicate copy of this page if paying by deposit account)

DO NOT USE THIS SPACE

9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

3/24/1999 INVENTEN 00000075 5646015

1 FC:581

520.00

Stephen A. Bent

Name of Person Signing

Reg. No. 29,768

Signature

March 22, 1999

Date

Total number of pages including cover sheet, attachments, and document: 4Mail documents to be recorded with required cover sheet information to:  
Commissioner of Patents & Trademarks, Box Assignments  
Washington, D.C. 20231PATENT  
REEL: 9827 FRAME: 0540

**ASSIGNMENT**

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the undersigned company:

**ASTRA AKTIEBOLAG**

having a place of business at

**S-151 85 Soderalje  
Sweden**

owner of the invention rights in the United States of America and its territories and possessions to the below listed U.S. Patent, as evidenced in the Assignment records in the U.S. Patent and Trademark Office, and by these presents hereby sells and assigns, unto:

**ALLELIX BIOPHARMACEUTICALS INC.**

having an address at

**6850 Goreway Drive  
Mississauga, Ontario  
Canada L4V 1V7**

(hereinafter ASSIGNEE) all right, title and interest for United States, its territories and possessions thereof, in and to the inventions and the applications therefor, identified as follows:

<b><u>PATENT NUMBER</u></b>	<b><u>ISSUE DATE</u></b>	<b><u>TITLE</u></b>
H 1606-3 US US 5,646,015	July 8 1997	EXCRETION OF HETEROLOGOUS PROTEINS FROM E. COLI
H 1603-1 US US 5,382,658	January 17, 1995	STABILITY-ENHANCED VARIANTS OF PARATHYROID HORMONE
H 1601-1 US US 5,208,041	May 4, 1993	ESSENTIALLY PURE HUMAN PARATHYROID HORMONE
H 1615-1 US US 5,496,801	May 5, 1996	PARATHYROID HORMONE FORMULATION
H 1606-2 US US 5,223,407	June 29, 1993	EXCRETION OF HETEROLOGOUS PROTEINS FROM E. COLI

US 5,599,792

February 4, 1997

BONE-STIMULATING, NON-  
VASOACTIVE PARATHYROID  
HORMONE VARIANTS

Serial No.

Filing Date

TITLE

H 1608-8 US  
08/463,222

June 5, 1995

PRODUCTION OF HUMAN  
PARATHYROID HORMONE FROM  
MICOORGANISMS

H 1608-7 US  
07/806,271

December 13, 1991

OXIDATION RESISTANT  
VARIANTS OF PARATHYROID  
HORMONE

H 1608-3 US  
08/329,856

October 27, 1994

STABILITY ENHANCED  
VARIANTS OF PARATHYROID  
HORMONE

H 1606-1 US  
07/239,145

August 31, 1988

EXCRETION OF HETEROLOGOUS  
PROTEIN FROM E. COLI

H 1608-6 US  
08/340,664

November 16, 1994

PRODUCTION OF HUMAN  
PARATHYROID HORMONE FROM  
MICROORGANISMS

H 1608-7 US  
08/461,436

June 5, 1995

PRODUCTION OF HUMAN  
PARATHYROID HORMONE FROM  
MICOORGANISMS

07/630,969

December 20, 1990

PARATHYROID HORMONE  
VARIANTS

including all reissue and extensions of Letters Patent granted for said invention; the Commissioner of Patents and Trademarks of the United States of America being hereby authorized to transfer said Letters Patent to said Assignee in accordance herewith; this assignment being under covenant, not only that full power to make the same is had by the undersigned, but also that such assigned right is not encumbered by any grant, license, or other right heretofore given, such that the Letters Patent shall be held and enjoyed by said Assignee as fully and entirely as the same could have been held and enjoyed by the undersigned if this assignment had not been made.

PATENT

REEL: 9827 FRAME: 0542

The undersigned hereby grants the firm of FOLEY & LARDNER the power to insert in this Assignment any further identification which may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation of this Assignment.

Company:  
Astra Aktiebolag  
(publ)

Date: 18.02.1999

By: [Signature]  
Name: p.p. Claes Wilhelmsson  
Title: Executive Vice President  
Research & Development

Date: 18.02.1999

WITNESS: [Signature]

Date: 18.02.1999

WITNESS: [Signature]

Note: Prima facie evidence of execution may optionally be obtained by execution of this document before a U.S. Consul or before a local officer authorized to administer oaths whose authority is proved by certificate from a U.S. Consul.